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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,535	01/23/2004	Sang Woon Suh	1740-000043/US	2581

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HARNESS, DICKEY & PIERCE, P.L.C.  
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RESTON, VA 20195

EXAMINER
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COLEMAN, VANESSA V

ART UNIT	PAPER NUMBER
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2627

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/11/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/762,535

Applicant(s)

SUH ET AL.

Examiner

Vanessa (Brandi) Coleman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-70 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Priority*

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Korea on 23 January 2003. It is noted, however, that applicant has not filed a certified copy of the 10-2003-0004488 application as required by 35 U.S.C. 119(b).

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami, et al. (hereafter "Murakami"), European Patent Publication Number EP 0997899 in view of Ma et al. (hereafter "Ma"), US Pre-Grant Patent Publication Number US 2004/0151091.

Regarding Claim 1, Murakami discloses a recording medium including recorded data (See Fig. 1A, optical disk 100), including: an information area, the information area including a first region for the recorded data (Fig. 1A and paragraph [0021], lines 2-3, "main information area"; see also paragraph [0011], lines 29-33), a second region for optional information which when present, controls recording or reproduction of the recorded data (Fig 1A and paragraph [0021], lines 3-4, "additional information area"; see also paragraph [0011], lines 33-35)), and a third region (Fig 1A and paragraph [0021], lines 5-6 and [0022], lines 33-34 and [0023] lines 38-39, "TOC area") for information identifying the presence or absence of the optional information ("stripe data identifier 104").

Murakami does not disclose that the optional information and/or said information identifying the presence or absence of said optional information **is encoded in wobbled pits.**

Ma discloses a recording medium (see Fig. 5, "optical-information storage medium 50") that contains information areas on the storage medium that are equivalent to the main information area and additional information area of Murakami (Fig. 5 "lead-in area 51" and "PIC area 57"), wherein the information equivalent to optional information is recorded in these areas on the disk are recorded with a pit wobble ([0035]), for the purpose of differentiating the optional information from recorded data. The limitation, "the optional information and/or said information identifying the presence or absence of said optional information being encoded in wobbled pits" is thus met by Ma.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the structure of the optical-information storage medium of Ma with that of the optical disk of Murakami, the motivation being to provide compatibility with standard disc structure, the inherent advantages of wobbled pit structure as in Ma, and to provide disc protection thereon as in Murakami.

Regarding Claim 2, Murakami discloses that the information identifying the presence or absence of the optional information (stripe data identifier 104) is recorded in a lead-in zone of the information area of the recording medium ([0021] lines 5-10 and [0022] lines 32-35).

Regarding Claim 3, Murakami discloses the recording medium of base claim 1, but does not disclose that the optional information and the information identifying the presence or absence of the optional information are recorded in a lead-in zone of the information area of the recording medium. However, both the main information area, which includes a lead-in area, and additional information area of Murakami are equivalent locations for storing control data, such as the claimed optional information, for the same purpose. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include both the optional information and the information identifying the presence or absence of the optional information in the lead-in area of Murakami, as the same result would be achieved by including the

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optional information in the lead-in area as including the optional information elsewhere on the disk.

Regarding Claim 4, Murakami discloses that the information identifying the presence or absence of the optional information (stripe data identifier 104) is recorded in a permanent information & control (PIC) data area of the information area of the recording medium ([0021] lines 5-10 and [0022] lines 32-35, where the lead-in area is equivalent to a PIC data area as it contains control data, "control data 103").

Regarding Claim 5, Murakami discloses the recording medium of base claim 1, but does not disclose that the optional information and said information identifying the presence or absence of the optional information are recorded in a permanent information & control (PIC) data area of the information area of the recording medium. However, both the main information area, which includes a lead-in area equivalent to a PIC data area as it contains control data ("control data 103"), and additional information area of Murakami are equivalent locations for storing control data, such as the claimed optional information. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include both the optional information and the information identifying the presence or absence of the optional information in the lead-in area, equivalent to a PIC data area, of Murakami, as the same result would be achieved by including the optional information in the lead-in area as not including the optional information in the lead-in area.

Regarding Claim 6, Murakami does not disclose that the optional information and said information identifying the presence or absence of the optional information are recorded in a permanent information & control (PIC) data area of the information area of the recording medium as part of disc information.

Refer to argument as to Claim 5 above regarding including optional information in a PIC data area.

Murakami discloses that the lead-in area equivalent to a PIC data area contains disk information ([0021] line 9, where control data is disc information). Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made that information located in a lead-in area, such as optional information and information identifying the presence or absence of the optional information, that contains disc information is then itself included as part of disc information.

Regarding Claim 7, Murakami does not disclose that the optional information and said information identifying the presence or absence of the optional information are recorded in a permanent information & control (PIC) data area of the information area of the recording medium independent of disc information.

Refer to argument as to Claim 5 above regarding including optional information in a PIC data area.

Murakami discloses that the lead-in area equivalent to a PIC data area contains disk information ([0021] line 9, where control data is disc information). Therefore, it

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would have been obvious to one of ordinary skill in the art at the time that the invention was made that information located in a lead-in area, such as optional information and information identifying the presence or absence of the optional information, that contains disc information can be considered independent of disc information as information individually recorded among disc information is itself independent of the added disc information.

Regarding Claim 8, Murakami does not disclose that the information identifying the presence or absence of the optional information is recorded in a burst cutting area (BCA) of the information area of the recording medium. However, both the main information area and additional information area, a burst cutting area (see Figs. 2A and 2B and [0027], "MBCA Control Data" area), of Murakami are equivalent locations for storing control data, such as the claimed information identifying the presence or absence of the optional information. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the information identifying the presence or absence of the optional information in the MBCA Control Data area of Murakami, as the same result would be achieved by including the information identifying the presence or absence of the optional information in the MBCA Control Data area as not including the information identifying the presence or absence of the optional information in the MBCA Control Data area.



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Regarding Claim 9, Murakami discloses that the information identifying the presence or absence of the optional information is a flag ([0023] lines 38-39, where stripe data identifier 104 is a flag).

Regarding Claim 10, Murakami does not disclose that the information identifying the presence or absence of the optional information is a header of at least one subsequent field containing the optional information. However, because the information identifying the presence or absence of the optional information must be located ahead of the optional information in order to identify the presence or absence of the optional information, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the information identifying the presence or absence of the optional information a header of a field containing the optional information.

Regarding Claim 11, Murakami discloses that the optional information is copy protection information ([0021], lines 24-28) and said information identifying the presence or absence of the optional information indicates whether copy protection is present ([0023], lines 38-39).

Regarding Claim 12, Murakami does not disclose that the information identifying the presence or absence of said optional information is recorded closer to the beginning of the recording medium than said optional information. However, because the information identifying the presence or absence of the optional information must be

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located ahead of the optional information in order to identify the presence or absence of the optional information, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the information identifying the presence or absence of the optional information is recorded closer to the beginning of the recording medium than the optional information.

Regarding Claim 13, Murakami discloses that the information identifying the presence or absence of said optional information is one byte ([0065], lines 30-31, where it is common in the art that 1 byte would be sufficient to represent "1".

Regarding Claim 14, Murakami does not disclose that the information identifying the presence or absence of said optional information is encoded in wobbled pits by bi-phase modulation.

Ma discloses a recording medium (see Fig. 5, "optical-information storage medium 50") that contains information areas on the storage medium that are equivalent to the main information area and additional information area of Murakami (Fig. 5 "lead-in area 51" and "PIC area 57"), wherein the information equivalent to optional information is recorded in these areas on the disk are recorded with a pit wobble ([0035]), for the purpose of differentiating the optional information from recorded data. Ma further discloses encoding data in wobbled pits by bi-phase modulation ([0036]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the structure of the optical disk of Murakami with that of

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the optical-information storage medium of Ma since Murakami discloses the structure of the optical disk but does not detail the track structure of the information recorded to it.

Regarding Claims 15-28, method claims 15-28 are drawn to the method of using the corresponding apparatus, recording medium, claimed in claims 1-14. Therefore method claims 15-28 correspond to apparatus claims 1-14 and are rejected for the same reasons of obviousness as used above.

Regarding Claims 29-42, method claims 29-42 are drawn to the method of using the corresponding apparatus, recording medium, claimed in claims 1-14. Therefore method claims 29-42 correspond to apparatus claims 1-14 and are rejected for the same reasons of obviousness as used above.

Regarding Claims 43-56, method claims 43-56 are drawn to the method of using the corresponding apparatus, recording medium, claimed in claims 1-14. Therefore method claims 43-56 correspond to apparatus claims 1-14 and are rejected for the same reasons of obviousness as used above.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 57-70 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 57-70 are drawn to an apparatus for reproducing data from a recording medium, however the claims do not include any structural limitation of the apparatus and it is therefore unclear as to what applicant intends to claim as his invention.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kondo Tetsuya	US 2003/0053404 A1
Lee et al.	US 2004/0120247 A1
Oshima et al.	US 6,885,629 B2
Jeon et al.	US 2005/0099916 A1
Kondo et al.	US 6,930,977 B1

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vanessa (Brandi) Coleman whose telephone number is (571) 272-9081. The examiner can normally be reached on Mon-Thurs 8:30-6, 1st Fri off, 2nd Fri 8:30-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Vanessa (Brandi) Coleman  
Art Unit 2627

VC

  
WAYNE YOUNG  
SUPERVISORY PATENT EXAMINER